OBSERVATIONS & RECOMMENDATIONS

After reviewing data collected from **MASCOMA LAKE, ENFIELD,** the program coordinators have made the following observations and recommendations:

Thank you for your continued hard work sampling the lake this season! Your monitoring group sampled **three** times this season and has done so for many years! As you know, multiple sampling events each season enable DES to more accurately detect water quality changes. Keep up the good work!

FIGURE INTERPRETATION

- **Figure 1 and Table 1:** Figure 1 (Appendix A) shows the historical and current year chlorophyll-a concentration in the water column. Table 1 (Appendix B) lists the maximum, minimum, and mean concentration for each sampling season that the lake has been monitored through VLAP.

  Chlorophyll-a, a pigment found in plants, is an indicator of the algal abundance. Because algae are usually microscopic plants that contain chlorophyll-a, and are naturally found in lake ecosystems, the chlorophyll-a concentration measured in the water gives an estimation of the algal concentration or lake productivity. **The median summer chlorophyll-a concentration for New Hampshire's lakes and ponds is 4.58 mg/m^3.**

  STATION 1 DEEP SPOT

  The current year data (the top graph) show that the chlorophyll-a concentration ***increased*** from **June** to **July**, and then ***decreased*** from **July** to **August**.

  The historical data (the bottom graph) show that the 2005 chlorophyll-a mean is ***less than*** the state median and the similar lake median (refer to Appendix F for more information about the similar lake median).

Overall, visual inspection of the historical data trend line (the bottom graph) shows a ***variable, but overall decreasing (meaning improving)*** in-lake chlorophyll-a trend since monitoring began. Specifically, the mean concentration has ***fluctuated between approximately 1.9 and 5.6 mg/m³*** since **1991.**

STATION 2 DEEP SPOT

The current year data (the top graph) show that the chlorophyll-a concentration ***increased*** from **June** to **July**, and then ***decreased very slightly*** from **July** to **August**.

The historical data (the bottom graph) show that the 2005 chlorophyll-a mean is ***less than*** the state median and is ***approximately equal to*** the similar lake median (refer to Appendix F for more information about the similar lake median).

Overall, visual inspection of the historical data trend line (the bottom graph) shows a ***variable, but overall decreasing (meaning improving),*** in-lake chlorophyll-a trend since monitoring began. Specifically, the mean concentration has ***fluctuated between approximately 2.6 and 6.6 mg/m³*** since **1991**.

In the 2006 annual report, since your group will have sampled the chlorophyll-a concentration at both deep spots for at least 10 consecutive years, we will conduct a statistical analysis of the historic data to determine if there has been a significant change in the annual mean since monitoring began.

While algae are naturally present in all lakes, an excessive or increasing amount of any type is not welcomed. In freshwater lakes, phosphorus is the nutrient that algae depend upon for growth. Algal concentrations may increase as nonpoint sources of phosphorus from the watershed increase, or as in-lake phosphorus sources increase (such as sediment phosphorus releases, known as internal loading). Therefore, it is extremely important for volunteer monitors to continually educate all watershed residents about activities within the watershed that affect phosphorus loading and lake quality.

- **Figure 2 and Table 3:** Figure 2 (Appendix A) shows the historical and current year data for lake transparency. Table 3 (Appendix B) lists the maximum, minimum and mean transparency data for each sampling season that the lake has been monitored through VLAP.

  Volunteer monitors use the Secchi-disk, a 20 cm disk with alternating black and white quadrants, to measure water clarity (how far a person can see into the water). Transparency, a measure of water clarity, can be affected by the amount of algae and sediment from erosion, as well as the natural colors of the water. **The median summer transparency for New Hampshire's lakes and ponds is 3.2 meters.**

  STATION 1 DEEP SPOT

  The current year data (the top graph) show that the in-lake transparency ***increased*** from **June** to **July**, and then ***decreased slightly*** from **July** to **August**.

  The historical data (the bottom graph) show that the 2005 mean transparency is ***less than*** the state median and is ***much less than*** the similar lake median (refer to Appendix F for more information about the similar lake median). It is important to point out that the 2005 mean transparency is the ***least deep (meaning the shallowest)*** annual transparency that has been measured since monitoring began.

  Overall, visual inspection of the historical data trend line (the bottom graph) shows a ***decreasing, meaning worsening,*** transparency trend since monitoring began in **1991**.

  STATION 2 DEEP SPOT

  The current year data (the top graph) show that the in-lake transparency ***increased*** from **June** to **July**, and then ***increased very slightly*** from **July** to **August**.

  The historical data (the bottom graph) show that the 2005 mean transparency is ***less than*** the state median and is ***much less than*** the similar lake median (refer to Appendix F for more information about the similar lake median).

  Overall, visual inspection of the historical data trend line (the bottom graph) shows a ***decreasing, meaning worsening,*** transparency trend since monitoring began in **1991**.

  Since your group will have sampled the transparency at both deeps spot for at least 10 consecutive years, the 2006 annual report will include a statistical analysis of the historic data to determine if there has been a significant change in the annual mean since monitoring began.

It is unusual that both deep spot stations are showing a ***decreasing (meaning improving)*** chlorophyll trend and a ***decreasing (meaning worsening)*** transparency trend. This is counter-intuitive as it is generally expected that as the chlorophyll (concentration of algal cells) in the lake decreases, the transparency (the depth to which one can see into the water) should increase. It is possible that the tributaries to the lake are transporting more sediment and color to the lake which is causing the decreasing transparency.

Typically, high intensity rainfall causes sediment erosion to flow into lakes and streams, thus increasing turbidity and decreasing clarity. Efforts should continually be made to stabilize stream banks, lake shorelines, disturbed soils within the watershed, and especially dirt roads located immediately adjacent to the edge of tributaries and the lake. Guides to Best Management Practices designed to reduce, and possibly even eliminate, nonpoint source pollutants, such as sediment loading, are available from DES upon request.

- **Figure 3 and Table 8:** The graphs in Figure 3 (Appendix A) show the amount of epilimnetic (upper layer) phosphorus and hypolimnetic (lower layer) phosphorus; the inset graphs show current year data. Table 8 (Appendix B) lists the annual maximum, minimum, and median concentration for each deep spot layer and each tributary since the lake has joined VLAP.

Phosphorus is the limiting nutrient for plant and algae growth in New Hampshire's freshwater lakes and ponds. Excessive phosphorus in a lake can lead to increased plant and algal growth over time. **The median summer total phosphorus concentration in the epilimnion (upper layer) of New Hampshire's lakes and ponds is 12 ug/L. The median summer phosphorus concentration in the hypolimnion (lower layer) is 14 ug/L.**

STATION 1 DEEP SPOT

The current year data for the epilimnion (the top inset graph) show that the phosphorus concentration ***decreased*** from **June** to **August**.

On the **June** sampling event, the total phosphorus concentration in the epilimnion (upper layer) sample was ***elevated*** (**17 ug/L**) as was the turbidity (**1.75 NTUs**). This suggests that a rainstorm may have recently contributed stormwater runoff to the lake, which contributed to phosphorus loading.

The historical data show that the 2005 mean epilimnetic phosphorus concentration is ***approximately equal to*** the state median and is ***greater than*** the similar lake median.

The current year data for the hypolimnion (the bottom inset graph) show that the phosphorus concentration ***remained stable*** from **June** to **July**, and then ***increased*** from **July** to **August**.

The turbidity of the hypolimnion (lower layer) sample was ***at least slightly elevated*** on each sampling event this season. In addition, the hypolimnetic turbidity has been ***at least slightly elevated*** on most sampling events during previous sampling seasons. This suggests that the lake bottom may have been disturbed by the anchor or by the Kemmerer Bottle while sampling and/or that the lake bottom is covered by a thick organic layer of sediment which is easily disturbed. When the lake bottom is disturbed, sediment, which typically contains attached phosphorus, is released into the water column. The presence of a thick organic layer on the lake bottom (which is likely comprised of decomposed plants and algae, and also sediment) would also explain the lower dissolved oxygen concentration near the lake bottom. When collecting the hypolimnion sample, make sure that there is no sediment in the Kemmerer Bottle before filling the sample bottles.

The historical data show that the 2005 mean hypolimnetic phosphorus concentration is ***greater than*** the state median and the similar lake median (refer to Appendix F for more information about the similar lake median).

Overall, visual inspection of the historical data trend line for the epilimnion and hypolimnion shows a ***variable*** phosphorus trend. Specifically, the mean annual epilimnetic phosphorus concentration has ***fluctuated between 6.7 and 14.7 ug/L*** and the mean annual hypolimnetic phosphorus concentration has ***fluctuated between 11 and 83.7 ug/L*** since monitoring began in **1991**.

<u>STATION 2 DEEP SPOT</u>

The current year data for the epilimnion (the top inset graph) show that the phosphorus concentration ***decreased steadily*** from **June** to **August**. As observed at the **Station 1** deep spot on the **June** sampling event, the epilimnetic phosphorus and turbidity were ***elevated*** which suggests that a rainstorm may have recently contributed stormwater runoff to the lake, which contributed to phosphorus loading.

The historical data show that the 2005 mean epilimnetic phosphorus concentration is ***greater than*** the state median and is ***much greater than*** the similar lake median.

The current year data for the hypolimnion (the bottom inset graph) show that the phosphorus concentration ***decreased greatly*** from **June** to **July**, and then ***remained stable*** from **July** to **August**.

As observed at **Station 1**, the hypolimnetic turbidity at the **Station 2** deep spot was ***at least slightly elevated*** on each sampling event this season and has been on many sampling events during previous sampling seasons which suggests that the lake bottom is covered by a thick organic layer of sediment that is easily disturbed.

The historical data show that the 2005 mean hypolimnetic phosphorus concentration is ***greater than*** the state median and the similar lake median (refer to Appendix F for more information about the similar lake median).

Overall, visual inspection of the historical data trend line for the epilimnion and hypolimnion shows a ***variable*** phosphorus trend. Specifically, the mean annual epilimnetic phosphorus concentration has ***fluctuated between 7.3 and 16.7 ug/L*** and the mean annual hypolimnetic phosphorus concentration has ***fluctuated between 11.3 and 34 ug/L*** since monitoring began in **1991**.

Since your group will have sampled the phosphorus concentration at both deep spot for at least 10 consecutive years, the 2006 annual report will include a statistical analysis of the historic data to determine if there has been a significant change in the annual mean since monitoring began.

One of the most important approaches to reducing phosphorus loading to a waterbody is to continually educate watershed residents about its sources and how excessive amounts can adversely impact the ecology and the recreational, economical, and ecological value of lakes and ponds. Phosphorus sources within a lake's watershed typically include septic systems, animal waste, lawn fertilizer, road and construction erosion, and natural wetlands.

TABLE INTERPRETATION

- **Table 2: Phytoplankton**
  Table 2 (Appendix B) lists the current and historical phytoplankton species observed in the lake. Specifically, this table lists the three most dominant phytoplankton species observed in the sample and their relative abundance in the sample.

  STATION 1 DEEP SPOT

  The dominant phytoplankton species observed in the **June** sample were ***Mallomonas* (golden-brown), *Cyclotella* (diatom),** and ***Asterionella* (diatom).**

  STATION 2 DEEP SPOT

  The dominant phytoplankton species observed in the **June** sample were ***Asterionella* (diatom), *Mallomonas* (golden-brown),** and ***Tabellaria* (diatom).**

  Phytoplankton populations undergo a natural succession during the growing season (Please refer to the "Biological Monitoring Parameters" section of this report for a more detailed explanation regarding seasonal plankton succession). Diatoms and golden-brown algae are typical in New Hampshire's less productive lakes and ponds.

- **Table 2: Cyanobacteria**
  A **small amount** of the cyanobacterium ***Anabaena*** and ***Microcystis*** were observed in the **June** plankton samples. ***These species, if present in large amounts, can be toxic to livestock, wildlife, pets, and humans.*** (Please refer to the "Biological Monitoring Parameters" section of this report for a more detailed explanation regarding cyanobacteria).

  Cyanobacteria can reach nuisance levels when phosphorus loading from the watershed to surface waters is increased (this is often caused by rain events) and favorable environmental conditions occur (such as a period of sunny, warm weather).

  The presence of cyanobacteria serves as a reminder of the lake's delicate balance. Watershed residents should continue to act proactively to reduce nutrient loading to the lake by eliminating fertilizer use on lawns, keeping the lake shoreline natural, re-vegetating cleared areas within the watershed, and properly maintaining septic systems and roads.

In addition, residents should also observe the lake in September and October during the time of fall turnover (lake mixing) to document any algal blooms that may occur. Cyanobacteria have the ability to regulate their depth in the water column by producing or releasing gas from vesicles. However, occasionally lake mixing can affect their buoyancy and cause them to rise to the surface and bloom. Wind and currents tend to "pile" cyanobacteria into scums that accumulate in one section of the lake. If a fall bloom occurs, please collect a sample (any clean jar or bottle will be suitable) and contact the VLAP Coordinator.

- **Table 4: pH**

Table 4 (Appendix B) presents the in-lake and tributary current year and historical pH data.

pH is measured on a logarithmic scale of 0 (acidic) to 14 (basic). pH is important to the survival and reproduction of fish and other aquatic life. A pH below 6.0 limits the growth and reproduction of fish. A pH between 6.0 and 7.0 is ideal for fish. The median pH value for the epilimnion (upper layer) in New Hampshire's lakes and ponds is **6.6**, which indicates that the surface waters in the state are slightly acidic. For a more detailed explanation regarding pH, please refer to the "Chemical Monitoring Parameters" section of this report.

The mean pH at the **Station 1** deep spot this season ranged from **6.18** in the hypolimnion to **6.79** in the epilimnion and at the Station 2 deep spot ranged from **6.24** in the hypolimnion to **6.67** in the epilimnion which means that the water is ***slightly acidic.***

It is important to point out that the pH in the hypolimnion (lower layer) was ***lower (more acidic)*** than in the epilimnion (upper layer). This increase in acidity near the lake bottom is likely due the decomposition of organic matter and the release of acidic by-products into the water column.

Due to the presence of granite bedrock in the state and acid deposition (from snowmelt, rainfall, and atmospheric particulates) in New Hampshire, there is not much that can be done to effectively increase lake pH.

- **Table 5: Acid Neutralizing Capacity**
  Table 5 (Appendix B) presents the current year and historical epilimnetic ANC for each year the lake has been monitored through VLAP.

  Buffering capacity (ANC) describes the ability of a solution to resist changes in pH by neutralizing the acidic input. The median ANC value for New Hampshire's lakes and ponds is **4.9 mg/L**, which indicates that many lakes and ponds in the state are at least "moderately vulnerable" to acidic inputs. For a more detailed explanation, please refer to the "Chemical Monitoring Parameters" section of this report.

  The mean Acid Neutralizing Capacity (ANC) of the epilimnion (the upper layer) at **Station 1** was **13.1 mg/L** and at **Station 2** was **12.8 mg/L** this season. Both deep spot annual means this season are ***greater than*** the state median and indicate that the lake ***has a low vulnerability*** to acidic inputs (such as acid precipitation).

- **Table 6: Conductivity**
  Table 6 (Appendix B) presents the current and historical conductivity values for tributaries and in-lake data. Conductivity is the numerical expression of the ability of water to carry an electric current (which is determined by the number of negatively charged ions from metals, salts, and minerals in the water column). The median conductivity value for New Hampshire's lakes and ponds is **40.0 uMhos/cm**. For a more detailed explanation, please refer to the "Chemical Monitoring Parameters" section of this report.

  The mean annual epilimnetic conductivity at **Station 1** was **63.89 uMhos/cm** and the mean annual epilimnetic conductivity at **Station 2** was **63.50 uMhos/cm**. Both epilimnetic annual means are ***greater than*** the state median.

  Overall, the conductivity has ***increased*** in the lake and has ***increased*** or ***remained elevated*** in many of the tributary sampling locations since monitoring began. Typically, sources of increased or elevated conductivity are due to human activity. These activities include failed or marginally functioning septic systems, agricultural runoff, and road runoff (which contains road salt during the spring snow melt). New development in the watershed can alter runoff patterns and expose new soil and bedrock areas, which could contribute to increasing conductivity. In addition, natural sources, such as iron and manganese deposits in bedrock, can influence conductivity.

We recommend that your monitoring group conduct a shoreline conductivity survey of the lake and the tributaries with ***elevated*** conductivity to help pinpoint the sources of conductivity.

To learn how to conduct a shoreline or tributary conductivity survey, please refer to the 2004 "Special Topic Article" or contact the VLAP Coordinator.

- **Table 8: Total Phosphorus**

Table 8 (Appendix B) presents the current year and historical total phosphorus data for in-lake and tributary stations. Phosphorus is the nutrient that limits the algae's ability to grow and reproduce. Please refer to the "Chemical Monitoring Parameters" section of this report for a more detailed explanation.

Overall, the tributary and outlet phosphorus concentrations were relatively low and similar to the results measured during previous sampling seasons.

However, the phosphorus concentration in **Browns Brook** was ***elevated*** on the **June** and **July** sampling events (**26 ug/L and 24 ug/L**, respectively). The turbidity at the location was ***elevated*** on the **July** sampling event (**3.82 NTUs**).

In addition, the phosphorus concentration in **Shaker Brook** was ***elevated*** **(27 ug/L)** on the **June** sampling event. However, the turbidity was ***not elevated*** (**0.38 NTUs**).

If you suspect that erosion is occurring in these areas of the watershed, we recommend that your monitoring group conduct a stream survey and storm event sampling along this inlet. This additional sampling may allow us to determine what is causing the ***elevated*** levels of turbidity and phosphorus.

For a detailed explanation on how to conduct rain event sampling and stream surveys, please refer to the 2002 VLAP Annual Report "Special Topic Article" or contact the VLAP Coordinator.

- **Table 9 and Table 10: Dissolved Oxygen and Temperature Data**

Table 9 (Appendix B) shows the dissolved oxygen/temperature profile(s) for the 2005 sampling season. Table 10 (Appendix B) shows the historical and current year dissolved oxygen concentration in the hypolimnion (lower layer). The presence of dissolved oxygen is vital to fish and amphibians in the water column and also to bottom-dwelling organisms. Please refer to the "Chemical Monitoring Parameters" section of this report for a more detailed explanation.

The dissolved oxygen concentration was ***lower in the hypolimnion (lower layer) than in the epilimnion (upper layer)*** at both deep spots of the lake on each sampling event. In addition, as the summer progressed, the hypolimnion oxygen at both deep spots became ***increasingly depleted.***

As stratified lakes age, and as the summer progresses, oxygen typically becomes ***depleted*** in the hypolimnion by the process of decomposition. Specifically, the loss of oxygen in the hypolimnion results primarily from the process of biological breakdown of organic matter (i.e.; biological organisms use oxygen to break down organic matter), both in the water column and particularly at the bottom of the lake where the water meets the sediment. When oxygen levels are depleted to less than 1 mg/L in the hypolimnion, the phosphorus that is normally bound up in the sediment may be re-released into the water column (a process referred to as ***internal phosphorus loading***).

- **Table 11: Turbidity**
  Table 11 (Appendix B) lists the current year and historical data for in-lake and tributary turbidity. Turbidity in the water is caused by suspended matter, such as clay, silt, and algae. Water clarity is strongly influenced by turbidity. Please refer to the "Other Monitoring Parameters" section of this report for a more detailed explanation.

  As discussed previously, the hypolimnetic turbidity at each deep spot this season was ***at least slightly elevated*** on each sampling event. In addition, the hypolimnetic turbidity has been ***at least slightly elevated*** on most sampling events during previous sampling seasons. This suggests that the lake bottom is covered by a thick organic layer of sediment which is easily disturbed. When the lake bottom is disturbed, sediment, which typically contains attached phosphorus, is released into the water column. The presence of a thick organic layer on the lake bottom (which is likely comprised of decomposed plants and algae, and also sediment) would also explain the lower dissolved oxygen concentration near the lake bottom.

- **Table 12: Bacteria (*E.coli*)**
  Table 12 lists the current year and historical data for bacteria *(E.coli)* testing. (Please note that Table 12 now lists the maximum and minimum results for this season and for all past sampling seasons.) *E. coli* is a normal bacterium found in the large intestine of humans and other warm-blooded animals. *E.coli* is used as an indicator organism because it is easily cultured and its presence in the water,

in defined amounts, indicates that sewage **MAY** be present. If sewage is present in the water, potentially harmful disease-causing organisms **MAY** also be present.

The *E.coli* concentration in each of the samples collected at the **Knox River Inlet**, **Mascoma River Inlet** and at **McConnell Road** this season was ***much less than*** the state standard of 406 counts per 100 mL for recreational waters that are not designated public beaches.

If residents are concerned about sources of bacteria such as failing septic systems, animal waste, or waterfowl waste, it is best to conduct *E. coli* testing when the water table is high, when beach use is heavy, or immediately after rain events.

- **Table 13: Chloride**

The chloride ion (Cl^-) is found naturally in some surfacewaters and groundwaters and in high concentrations in seawater. Research has shown that ***elevated*** chloride levels can be toxic to freshwater aquatic life. In order to protect freshwater aquatic life in New Hampshire, the state has adopted **acute and chronic** chloride criteria of **860 and 230 mg/L** respectively. The chloride content in New Hampshire lakes is naturally low, generally less than 2 mg/L in surface waters located in remote areas away from habitation. Higher values are generally associated with salted highways and, to a lesser extent, with septic inputs. Please refer to the "Chemical Monitoring Parameters" section of this report for a more detailed explanation.

Chloride sampling was not conducted during 2005.

A limited amount of epilimnetic deep spot chloride sampling was conducted during **2004** and the results ranged from **9 to 10 mg/L,** which is much less than the state acute and chronic chloride criteria. However, this concentration is ***greater than*** what we would normally expect to measure in undisturbed New Hampshire surface waters.

We recommend that your monitoring group conduct chloride sampling in the epilimnion at the deep spots and in the inlets near salted-roadways, particularly in the spring, soon after snow-melt and after rain events during the summer. This will establish a baseline of data that will assist your monitoring group and DES to determine lake quality trends in the future.

Please note that there will be an additional cost for each of the chloride samples and that these samples must be analyzed at the DES laboratory in Concord. In addition, it is best to conduct chloride *sampling in the spring as the snow is melting and during rain events.*

- **Table 14: Current Year Biological and Chemical Raw Data**
  This table lists the most current sampling season results. Since the maximum, minimum, and annual mean values for each parameter are not shown on this table, this table displays the current year "raw" (meaning unprocessed) data. The results are sorted by station, depth zone (epilimnion, metalimnion, and hypolimnion) and parameter.

- **Table 15: Station Table**
  As of the Spring of 2004, all historical and current year VLAP data are included in the DES Environmental Monitoring Database (EMD). To facilitate the transfer of VLAP data into the EMD, a new station identification system had to be developed. While volunteer monitoring groups can still use the sampling station names that they have used in the past (and are most familiar with), an EMD station name also exists for each VLAP sampling location. For each station sampled at your lake, Table 15 identifies what EMD station name corresponds to the station names you have used in the past and will continue to use in the future.

DATA QUALITY ASSURANCE AND CONTROL

Annual Assessment Audit:

During the annual visit to your lake, the biologist conducted a "Sampling Procedures Assessment Audit" for your monitoring group. Specifically, the biologist observed the performance of your monitoring group while sampling and filled out an assessment audit sheet to document the ability of the volunteer monitors to follow the proper field sampling procedures (as outlined in the VLAP Monitor's Field Manual). This assessment is used to identify any aspects of sample collection in which volunteer monitors fail to follow proper procedures, and also provides an opportunity for the biologist to retrain the volunteer monitors as necessary. This will ultimately ensure that the samples that the volunteer monitors collect are truly representative of actual lake and tributary conditions.

Overall, your monitoring group did an ***excellent*** job collecting samples on the annual biologist visit this season! Specifically, the members of your monitoring group followed the proper field sampling procedures and there was no need for the biologist to provide additional training. Keep up the good work!

Sample Receipt Checklist:

Each time your monitoring group dropped off samples at the laboratory this summer, the laboratory staff completed a sample receipt checklist to assess and document if the volunteer monitors followed proper sampling techniques when collecting the samples. The purpose of the sample receipt checklist is to minimize, and hopefully eliminate, future re-occurrences of improper sampling techniques.

Overall, the sample receipt checklist showed that your monitoring group did an ***excellent*** job when collecting samples and submitting them to the laboratory this season! Specifically, the members of your monitoring group followed the proper field sampling procedures and there was no need for the laboratory staff to contact your group with questions, and no samples were rejected for analysis.

USEFUL RESOURCES

Best Management Practices to Control Nonpoint Source Pollution: A Guide for Citizens and Town Officials, NHDES Booklet WD-03-42, (603) 271-2975.

Canada Geese Facts and Management Options, NHDES Fact Sheet BB-53, (603) 271-2975 or www.des.state.nh.us/factsheets/bb/bb-53.htm.

Cyanobacteria in New Hampshire Waters Potential Dangers of Blue-Green Algae Blooms, NHDES Fact Sheet WMB-10, (603) 271-2975 or www.des.state.nh.us/factsheets/wmb/wmb-10.htm.

Erosion Control for Construction in the Protected Shoreland Buffer Zone, NHDES Fact Sheet WD-SP-1, (603) 271-2975 or www.des.state.nh.us/factsheets/sp/sp-1.htm.

Impacts of Development Upon Stormwater Runoff, NHDES Fact Sheet WD-WQE-7, (603) 271-2975 or www.des.state.nh.us/factsheets/wqe/wqe-7.htm.

Lake Protection Tips: Some Do's and Don'ts for Maintaining Healthy Lakes, NHDES Fact Sheet WD-BB-9, (603) 271-2975 or www.des.state.nh.us/factsheets/bb/bb-9.htm.

Low Impact Development Hydrologic Analysis. Manual prepared by Prince George's County, Maryland, Department of Environmental Resources. July 1999. To access this document, visit www.epa.gov/owow/nps/lid_hydr.pdf or call the EPA Water Resource Center at (202) 566-1736.